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# Institutional Factors Affecting Candidate Performance on the CPA Exam

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HONORS THESIS

Certificate of Approval

Institutional Factors Affecting Candidate Performance on the CPA Exam

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# Institutional Factors Affecting Candidate Performance on the CPA Exam

Submitted in partial fulfillment
of the requirements
for the Murray State University Honors Diploma

Jovondra Coffey

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**Abstract**

This study examines whether the existence and type of an academic institution's accreditation and Beta Alpha Psi honor society chapter affect the performance of candidates from those institutions on the Uniform CPA exam. There are three accreditations this study will examine: Association to Advance Collegiate Schools of Business (AACSB), Accreditation Council for Business Schools and Programs (ACBSP), and International Assembly for Collegiate Business Education (IACBE). This paper reviews the processes to obtain these accreditations and whether certain accreditations are associated with candidate success on the CPA exam. It also studies whether Beta Alpha Psi chapters have had an impact on candidate scores over the years; and if the type of chapter (eligible to have a chapter but does not, non-award seeking chapter, award seeking chapter) plays a significant role. Across a five-year period (2015-2019), results indicate that students from AACSB accredited institutions consistently outperform students from institutions with some other type of accreditation (ACBSP or IACBE). In 2015 and 2017, there was a significant difference between students from accredited institutions and students from academic institutions with no accreditation in which students from accredited institutions performed better. In 2016, 2018, and 2019, there were no significant differences. In addition, students from academic institutions with a Beta Alpha Psi chapter performed better across all five years than students from institutions without a Beta Alpha Psi chapter.

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## 1) Introduction

Becoming a licensed Certified Public Accountant is a significant achievement for persons going into the accounting industry. It is required for anyone going into public accounting and it is commonly the preferred certification for those employed in the private or government sector. Obtaining one's CPA license is a strenuous process that includes passing all four parts of the CPA exam, having a minimum number of credit hours in both accounting and general business courses (requirements vary by state), 150 total collegiate credit hours, and a minimum number of hours of professional accounting experience (requirements vary by state) (www.aicpa.org). Because of these requirements, obtaining a CPA license is a universally recognized standard of accounting knowledge. Passing the CPA exam and CPA exam scores themselves have long been considered the "benchmark" of success because the exam is standardized, testing the same material information for each candidate (Allen, 2006). There has been recent discussion over whether the CPA exam should continue to be the benchmark of accounting student success due to the number of accounting majors who will pursue other career objectives and never take the CPA exam. Until a better benchmark can be found, however, the CPA exam continues to be the standard (Morgan, 2011). The dependent variable for testing will be first-time pass rates. A "first-time" score is reported when a candidate takes any part of the CPA exam for the first time. Based on past studies, first-time test scores are a better indicator of actual performance than overall scores because once a candidate has taken a part, they are likely to improve on their successive attempts (Nagle, Menk, Rau, 2018); consequently a first-time score gives a better indication of raw knowledge regarding the respective subject matter.

Factors have been researched to determine if they have any correlation with a candidate's success on the CPA exam. One such factor is AACSB accreditation and there have been

conflicting conclusions. AACSB-accredited institutions supposedly have an edge over non-accredited institutions because of the rigorous process to obtain that accreditation. The purpose of AACSB accreditation is to "promote continuous improvement" (Morgan, 2011). This study will focus not only on AACSB accreditation, but other accreditation bodies (i.e. ACBSP, IACBE) and how each one plays a role into the success of candidates on the CPA exam.

An additional variable in the present study is the presence and status level of a Beta Alpha Psi chapter. Beta Alpha Psi is an international honor society for accounting, finance and information systems students attending universities accredited by AACSB or the European Quality Improvement System. The organization's main goal is to encourage the profession of financial and business information while providing opportunities for service and professional development. While it is not the purpose of Beta Alpha Psi to prepare candidates for the CPA exam, there is a rigorous process necessary to obtain a Beta Alpha Psi chapter on campus that could correlate to how well a business school prepares its students for the exam. This study compares AACSB institutions that do not have Beta Alpha Psi chapters to institutions that do and examines within the sample of institutions that do have chapters, whether chapter status level has any impact on candidate scores. Chapter statuses from highest to lowest include Gold, Superior, Distinguished, and Non- Award. While research has been done on the level of preparation received from Beta Alpha Psi for the professional world (Porco, 2003), no research has been completed to my knowledge, on whether or not there is any correlation between Beta Alpha Psi chapters and success on the CPA exam.

In this study, it is expected that results will show that candidates from academic institutions with some sort of accreditation on average perform better on the CPA exam than candidates from academic institutions without an accreditation. Furthermore, it is expected that

results will show candidates from academic institutions with AACSB accreditation will perform better than candidates from academic institutions with other accreditation. In regards to Beta Alpha Psi type, it is expected that results will show that candidates from academic institutions with a Beta Alpha Psi chapter will perform better on the CPA exam than candidates from academic institutions without a Beta Alpha Psi chapter. Finally, it is expected that results will show that candidates from institutions with an award-seeking Beta Alpha Psi chapter on average will perform better on the CPA exam than candidates from institutions with a non-award seeking Beta Alpha Psi chapter.

## 2) Background, Literature Review, and Hypothesis Development

### *a) CPA Exam*

The CPA exam consists of four separate parts: Auditing and Attestation (AUD), Business Environment and Concepts (BEC), Financial Accounting and Reporting FAR), and Regulation (REG). Each part consists of four hours of testing in addition to a fifteen-minute break and another fifteen minutes allocated for signing in and other administrative tasks, thereby totaling 4.5 hours. One must score a 75 or higher on each part to pass. Once a candidate passes the first part of the exam, they have eighteen months from that date to pass the remaining three parts (www.aicpa.org). There is no certain order that a candidate has to take the exam; though research suggests that candidates pass the whole of the exam most quickly when they take FAR first and least quickly when they take BEC first (Bline, Perreault, & Zheng, 2016).

The CPA exam went through major changes in 2004. The first big change was that the four sections that are common today were solidified; before 2004, the four

sections were Business Law and Professional Responsibilities (LPR), Auditing (AUDIT), Accounting and Reporting (ARE), and Financial Accounting and Reporting - Business Enterprises FARE). The second big change came when the exam became computerized, which presented benefits and challenges alike to candidates, but made the exam much easier to grade, allowed scores to be sent out faster and be offered more frequently. Prior to this change, the CPA exam was only offered twice per year, in the first week of May and the first week of November. The third huge change was the fact that a candidate no longer had to sit for all four parts at once (Brasel et al., 2016).

Until 2004, it was common to take the exam a minimum of three times: the first time to get the feel of having to sit for an exam for sixteen hours, the second time a candidate was expected to pass at least two parts of the exam, and the third time to pass the other two parts. Obviously, there were many exceptions to that path, as some people only sat for the exam once and some people sat many more times than three. Before the big change, a candidate who had neither previously taken the exam nor passed at least two sections in a previous exam sitting not only had to pass at least two sections of the exam in one sitting, but also earn a score of at least 50 on the other two sections in order for the passed sections to count (Howell, 2018). After passing two or more sections and scoring at least a 50 on the remaining sections, the candidate could focus exclusively on the remaining non-passed sections.

In 2011, the exam underwent another big change when the AICPA changed the format of the exam. This included replacing written communication tasks and longer simulations with shorter task-based simulations (TBS) in the AUD, FAR, and REG sections. Written communication tasks were added to the BEC section. The AUD section

was shortened and BEC was lengthened. In 2016, the weight of multiple-choice questions and TBS were changed into what the exam is today. For the last fourteen years, the cumulative average pass rate has been between 45%-50% (Gleim Exam Prep).

*b) Accreditation*

The goal of any accreditation organization is to provide quality assurance within business education. Now called the Association to Advance Collegiate Schools of Business, the first organization to provide accreditation in 1916 formerly was called the American Assembly of Collegiate Schools of Business (AACSB).

An AACSB accreditation is often regarded as having the highest standards of excellence and, therefore, its achievement has rigorous requirements. To obtain AACSB accreditation, an institution must be an Educational Member of the AACSB. To qualify, an academic institution must offer baccalaureate and/or graduate degrees in business administration, management, or accounting; and at least one of those programs must be offered through the institution itself rather than through a partnership. Once an institution completes the application and gets approved, it is considered an Educational Member (www.aacsb.edu/membership/educational).

Extra steps are required to obtain the actual accreditation. The first step is submitting two applications, a unit-of-accreditation application and an eligibility application. The eligibility application considers things such as: intellectual capability of instructors, number of full-time/part-time faculty, diversity, research levels, and details of programs to be included in the review. Once both applications are approved, the institution is assigned a mentor and is tasked with completing an initial self-evaluation

report (iSER) and a strategic plan. The iSER alone typically takes one year to complete, but a maximum of two years is allotted (aacsb.edu/accreditation/journey).

From there, one of four outcomes is possible: 1) the iSER is accepted and the institution is able to develop a final self-evaluation report along with gaining an invitation to apply for accreditation, 2) the iSER is accepted with a recommendation that the institution moves to the implementation phase and submits annual progress reports until they are invited to apply for accreditation, 3) the institution is told to revise and resubmit their iSER, or 4) the iSER is not accepted because it has been determined that the institution will not be able to align itself with the values and standards worthy of AACSB accreditation. If the institution moves forward in the application process, there is a site visit; and if all goes well, recommendations for accreditation are sent to the AACSB board of directors for ratification. On average, it takes between four and five years for an institution to earn AACSB accreditation.

The Accreditation Council for Business Schools and Programs (ACBSP) is relatively new, founded in 1988. Its purpose is to reward academic excellence by offering accreditation to business programs that convey strong aspects of leadership, strategic planning, quality of academic programs, etc. (www.acbsp.org). The ACBSP is the only accreditation council that offers their accreditation to business schools that offer associate degrees. To obtain accreditation from the ACBSP, a program first needs to become a member. Once the program is a member, they then will submit an application, along with fees. It is assigned a mentor and required to complete a self-study. Once the self-study is submitted, there is a site visit and the decision on whether this program will be accredited is made in April or November each year (www.acbsp.prg).

The International Accreditation Council for Business Education (IACBE) is even newer, having been founded in 1997 (www.iacbe.org). A few of its core values include collegiality, developmental philosophy, and responsiveness. To obtain accreditation, an institution's business program must be an Educational Member. A program is eligible to be a Member if the institution to which it belongs: has nationally recognized accreditation, grants business degrees at bachelor's, master's, or doctoral levels, and has a publicly stated mission appropriate for a college/university. If a program meets those initial requirements, then it just needs to submit an application to be approved. Once a program is an Educational Member, it must be granted candidacy status. This is done by submitting an application and undergoing an initial site visit. Should both go well, the program is now a candidate for accreditation. From there, the program applies for accreditation and has another site visit. One representative from the candidate institution must attend the IACBE Accreditation Institute while in the application process. Attending the institute is required for programs going through the candidacy, first-time accreditation, or reaffirmation process. The institute provides more information on the application process and aims to help programs have a smooth transition. The institution then prepares a self-study, which goes through drafts, until the final one is submitted to the IACBE. There is a third site visit and based on the site visit and the self-study, the institution is either granted accreditation or not.

Numerous studies have looked at AACSB accreditation and whether it has any impact on the success of candidates on the CPA exam. One study found that AACSB accredited institutions had a 6-8% higher exam pass rate since 2004 (Morgan, Bergin, and Sallee, 2008). Another study (Boone, Legoria, Seifert, & Stammerjohan, 2006)

attempted to remove any systematic differences (size, selectivity in admissions, faculty credentials, etc.) and found a weak correlation between pass rates and accreditation.

Bunker and Harris (2014) compared the CPA Exam pass rates of online institutions with brick-and-mortar institutions. They determined that there is a significant difference in the quality of education received from Accounting programs where most of the instruction is delivered online (at least 80% of content is online) and quality of education received from Accounting programs where most of the instruction is in person (at *most* 30% of content is online). This study also concluded that brick-and-mortar institutions that were not AACSB accredited on average had lower scores on the CPA exam than institutions that were AACSB accredited.

Another study (Morgan, 2011) approached the accreditation topic from the angle of newly accredited institutions. The authors researched if newly accredited institutions showed improvements in their average CPA exam scores in the years since obtaining their accreditation compared to change-in-exam scores for non-accredited institutions during that same time period. The results showed that there was a significant improvement in scores for institutions that recently obtained their accreditation versus non-accredited institutions, which suggests that there was an increase in quality in the education at these newly accredited institutions and/or an ability to attract better students.

Researchers analyzing candidate success on the CPA exam, have also examined the success of candidates who have completed a graduate degree compared to those who have not completed a graduate degree. Results show that, on average, candidates who have completed a graduate degree performed significantly better than candidates who have not completed a graduate degree (Nagle et al. 2018). This same study also looked at

other factors, including the percentage of faculty in accounting programs who have a PhD or DBA (Doctorate of Business Administration). The study found no significant correlation between the proportion of faculty with terminal degrees and student success on the CPA exam. Another factor examined was whether an institution was public or private. Results did not indicate that there was any significant difference in candidate performance from private institutions compared to public institutions.

Boone et al. (2006) looked into some of the same factors, such as candidates with graduate degrees compared to candidates without graduate degrees, and also found that candidates with graduate degrees performed better than candidates without graduate degrees. This study also considered AACSB accreditation, but focused more on whether certain institutions were more inclined to have the accreditation due to other factors. For example, one factor they looked at was the "ability" of candidates from different institutions (this was determined based on how selective an institution was). While the selectivity of candidates is not one of the things taken into consideration when an academic institution applies for AACSB accreditation, the study indicated that an institution that has high standards for their students most likely have high standards for their faculty as well, and that does come into play when an academic institution is applying for AACSB accreditation. Boone et al. also reviewed the median ACT scores of different institutions to determine if there was any correlation between those scores and how well the candidates from that institution performed on the CPA exam. Results showed that the majority of the correlation between AACSB accreditation and performance on the CPA exam was explained by student selectivity.

Nagle et. al (2018) looked at factors such as level of education, faculty competence, selectiveness of institutions, and private versus public institutions. The same study even dived into the difference between institutions that are members of the AACSB versus institutions that are not. To obtain accreditation, an institution must be a member; but a member does not have to obtain accreditation. Results indicate that accredited institutions on average had higher pass rates than non-accredited institutions, and that member institutions on average had higher pass rates than non-member institutions. Thus, CPA exam performance should be higher for accredited institutions. Therefore, the following hypotheses are proposed:

**H1a.** Institutions with any type of accreditation (AACSB, ACBSP and/or IACBE) will have higher CPA exam pass rates than those without accreditation.

**H1b.** Institutions with AACSB accreditation will have higher CPA exam pass rates than those with other (ACBSP and/or IACBE) accreditation.

*c) Beta Alpha Psi*

Beta Alpha Psi is an honor society for accounting, finance and information systems students with chapters around the globe. It was founded in 1919 with the goal of providing educational and professional support and promoting excellence. Because of the requirements to become an established chapter and the requirements for students to become members, Beta Alpha Psi status has been highly regarded in both the educational and professional worlds (Stephens, 2007).

In recent years however, a question has been raised on whether Beta Alpha Psi was still relevant to the accounting profession. In recent years, public accounting firms

from the international level to the regional level have not only been hiring interns earlier in their college careers, but also conducting leadership institutes to meet students even earlier than that. Stephens (2007) points out that during the time that students would be trying to join Beta Alpha Psi, most are competing for internships and if offered a position, see less value in being a Beta Alpha Psi member. The same article then argues why Beta Alpha Psi *is* still relevant with reasons including the building of relationships, development of leadership skills, and encouragement of ethical behavior.

To establish a Beta Alpha Psi chapter on campus, the associated business school must be AACSB accredited which, as noted above, is a very lengthy process on its own. In addition to the accreditation requirement, the institution must first qualify to be a petitioning chapter and from there, they must submit an application and complete a site visit. To become a petitioning chapter, there must be at least ten students that are interested in and eligible to be members of Beta Alpha Psi and a qualified faculty member who is willing to serve as the advisor (www.bap.org/petitioning-process)

There is also an application process which requires the potential petitioning chapter to submit the following: a statement of objectives, a plan of activities for the first two semesters (or first three quarters) that details how the chapter will meet the petitioning activity requirements (should they qualify to be a petitioning chapter), proposed chapter bylaws, contact information of the faculty advisor, a letter of support from the Dean of the institution, a letter of support from at least one of the Chairs of the accounting, finance, business analytics, or digital technology departments, and a petitioning fee. Once the application is processed, the chapter either receives approval to

be a petitioning chapter or comments on their application (www.bap.org/petitioning-process).

Once the chapter is officially named a "petitioning chapter," they are typically required to complete four semesters (or six quarters) of approved activities. This includes electing officers, adopting bylaws, participating in annual and regional activities, and completing the minimum required mission-based activities for three semesters (or four or five quarters). During this petitioning period, Beta Alpha Psi representatives will conduct a site visit; upon approval of the report of the site visit, an installation ceremony will be scheduled (www.bap.org/petitioning-process).

For a student to become a member of a Beta Alpha Psi chapter, they must have declared a major in accounting, finance, business analytics, or digital technology. In addition, they must have completed at least one and a half years of college coursework and have taken at least one course in the aforementioned departments. Students must have a GPA of at least 3.0 in their upper-level major courses, and have achieved one of the following: a cumulative GPA of at least 3.0, ranked within the top 35% of their institution class, a cumulative GPA of at least 3.25 in the most recent thirty credit hours, or attained an honors distinction from their institution deemed to be equivalent to the previously mentioned achievements (www.bap.org/eligibility).

Since Beta Alpha Psi has the intention to provide support for students and promote excellence, the majority of research related to Beta Alpha Psi focuses on how much of an advantage the organization gives to undergraduates when it is time for them to enter the workforce. One study examined whether members of Beta Alpha Psi demonstrate a greater showing of moral behavior by looking at volunteerism, student

government participation, and reflectiveness of decision making compared to undergraduate accounting students who are not in Beta Alpha Psi (Porco, B. M., 2003). The results concluded that a significant relationship is present between students being members of Beta Alpha Psi and having a greater moral development. For this reason among others, it is believed that Beta Alpha Psi is a strong factor when it comes to preparing accounting majors for the professional world. Therefore, the following hypotheses are proposed:

**H2a:** Institutions with a Beta Alpha Psi chapter will have higher CPA exam pass rates than institutions without a Beta Alpha Psi chapter.

**H2b:** Institutions with an awarded Beta Alpha Psi chapter will have higher CPA exam pass rates than institutions with a Non-Award Beta Alpha Psi chapter.

## 3) Methodology

### *a) Dependent Variable*

CPA Exam pass rate data for this study was collected using the National Association of State Boards of Accountancy's *Candidate Performance on the Uniform CPA Examination* report for the years 2015 through 2019. Specifically, the average scores of first-time test takers were gathered. A total of 1,213 institutions from the 50 states plus Guam and the District of Columbia are included in the data. Academic institutions that did not have scores reported for all 5 years were still included in the data, meaning that some institutions do not have data reported for every year. For testing, average first-time CPA exam scores represent the dependent variable and Beta Alpha Psi type and Accreditation type represent the independent variables.

TABLE 1: Descriptive Statistics

**Descriptive Statistics**

| | N | Range | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| 2015 FT Ave Score | 1055 | 42.4 | 41.8 | 84.2 | 69.685 | 6.9304 |
| 2016 FT Ave Score | 1062 | 46.8 | 39.8 | 86.6 | 69.310 | 7.0938 |
| 2017 FT Ave Score | 1025 | 43.1 | 44.0 | 87.1 | 68.791 | 7.0025 |
| 2018 FT Ave Score | 992 | 43.7 | 43.8 | 87.5 | 70.145 | 7.0762 |
| 2019 FT Ave Score | 979 | 48.8 | 36.7 | 85.5 | 70.541 | 7.0842 |
| Valid N (listwise) | 838 | | | | | |

Table 1 above represents how many academic institutions (N) are included in the data for each individual testing year, along with generic statistics about the scores during that testing year. The average first-time scores reported for an academic institution is an average of all the parts taken by all candidates from that institution during the year.

*b) Independent Variables*

To determine the accreditations of these institutions, if any at all, I used databases from AACSB, ACBSP, and IACBE. The variables for Accreditation type are no accreditation, AACSB accreditation, and other accreditations (which consist of ACBSP and IACBE).

A database from Beta Alpha Psi headquarters was obtained to determine which institutions had a chapter and what the status of those chapters was for each of the five

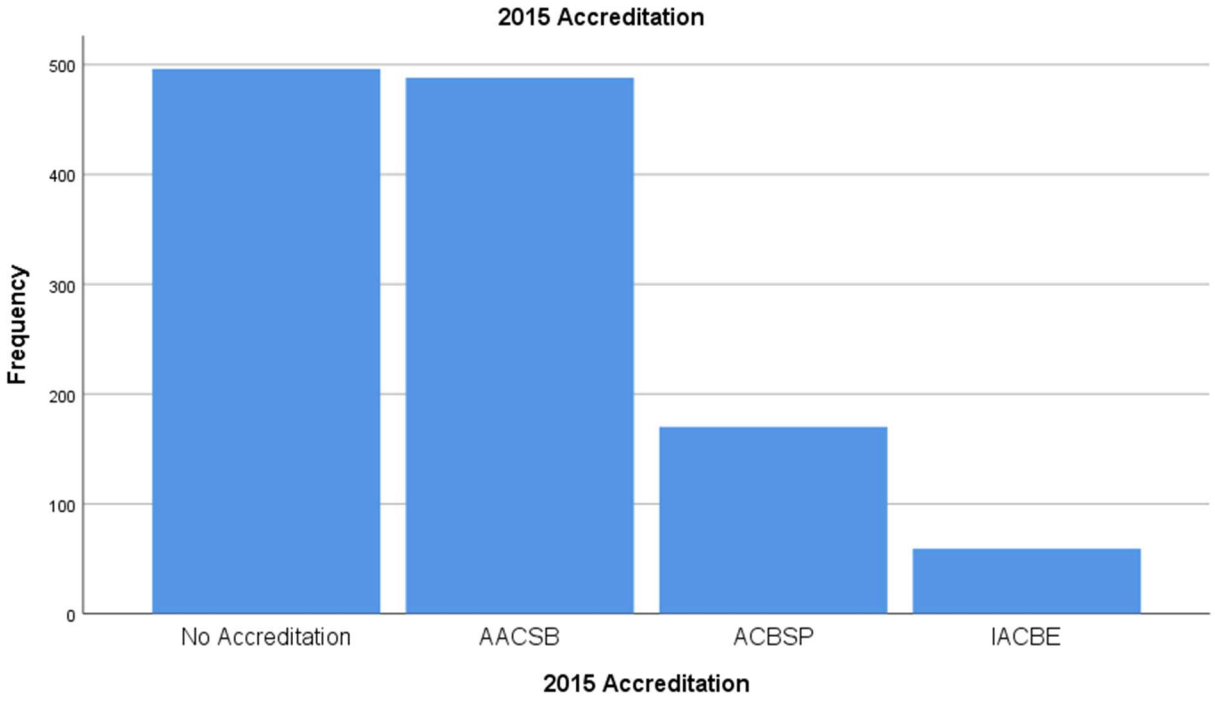
years under examination. The variable levels for Beta Alpha Psi type are as follows: an institution that is not allowed to have a chapter (because they do not have AACSB accreditation), an institution that is allowed to have a chapter (based solely off the fact that they have AACSB accreditation) but does not, an institution with a chapter that has no award status, and an institution with a chapter that has an award status. For the purpose of testing, institutions that are not eligible to have a Beta Alpha Psi chapter were removed from the comparative testing. An institution that is not eligible to have a Beta Alpha Psi chapter is an institution that does not have AACSB accreditation. Given that tests are already being conducted on the difference between scores from AACSB institutions and non-AACSB institutions, including ineligible institutions was deemed redundant.

TABLE 2: Descriptive Statistics for Accreditation Type

Panel A:

**2015 Accreditation**

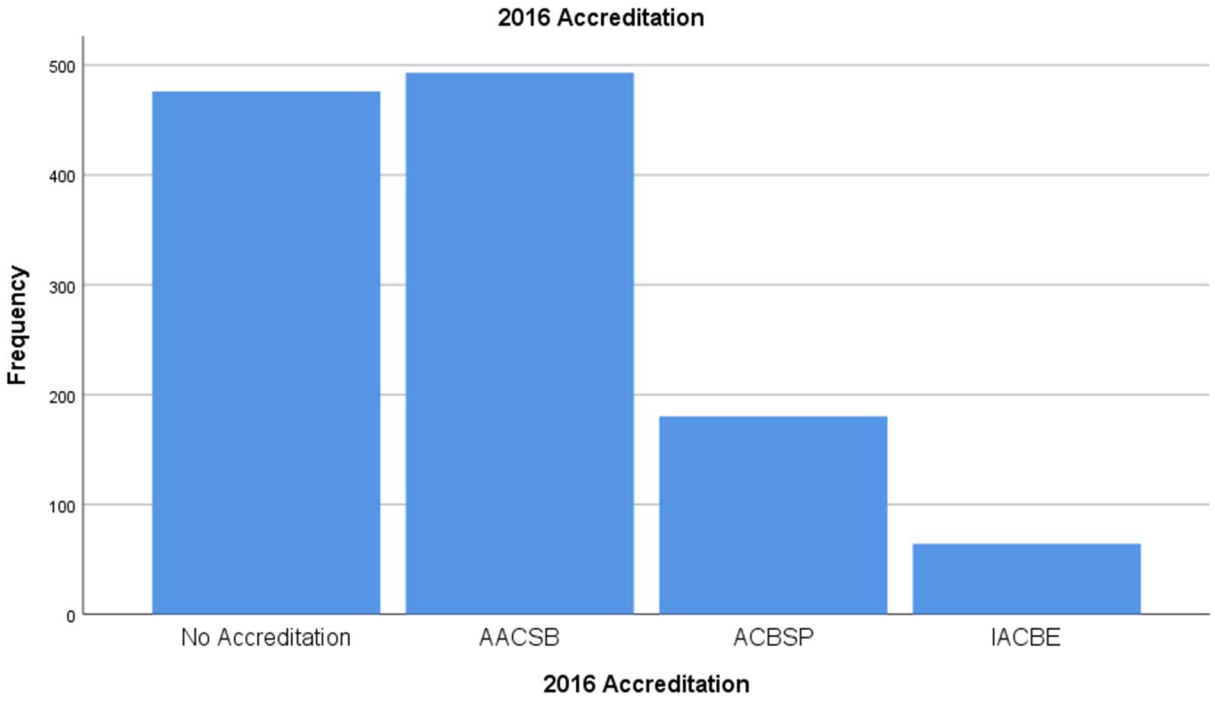
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | No Accreditation | 496 | 40.9 | 40.9 | 40.9 |
| | AACSB | 488 | 40.2 | 40.2 | 81.1 |
| | ACBSP | 170 | 14.0 | 14.0 | 95.1 |
| | IACBE | 59 | 4.9 | 4.9 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




Panel B:

**2016 Accreditation**

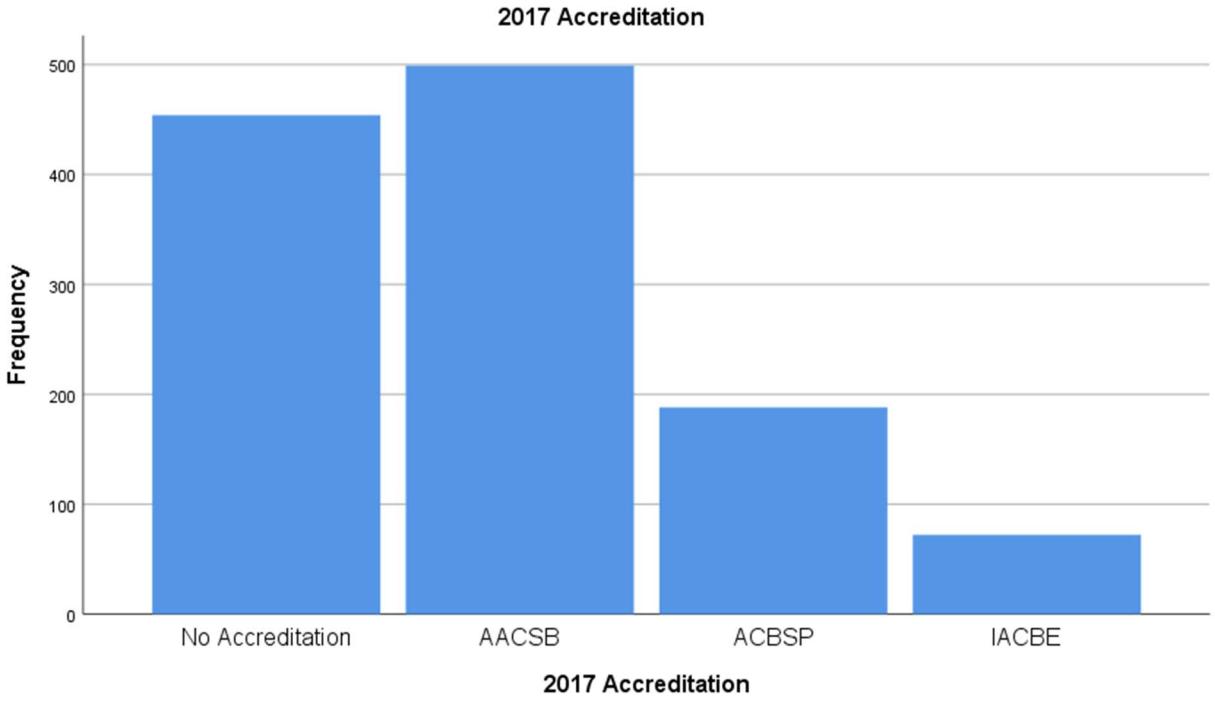
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | No Accreditation | 476 | 39.2 | 39.2 | 39.2 |
| | AACSB | 493 | 40.6 | 40.6 | 79.9 |
| | ACBSP | 180 | 14.8 | 14.8 | 94.7 |
| | IACBE | 64 | 5.3 | 5.3 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




Panel C:

**2017 Accreditation**

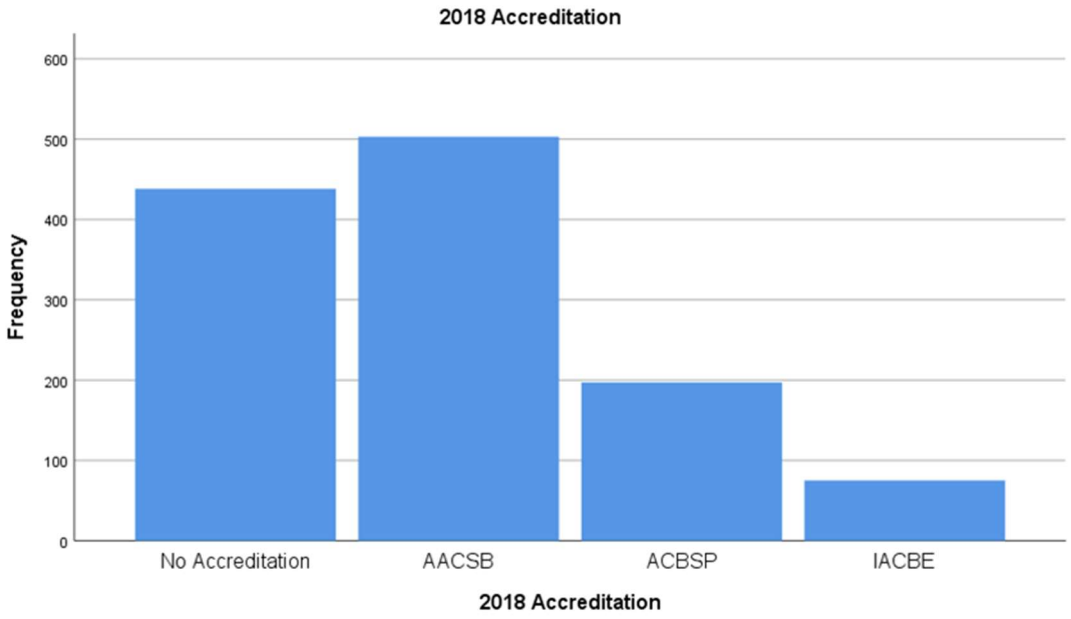
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | No Accreditation | 454 | 37.4 | 37.4 | 37.4 |
| | AACSB | 499 | 41.1 | 41.1 | 78.6 |
| | ACBSP | 188 | 15.5 | 15.5 | 94.1 |
| | IACBE | 72 | 5.9 | 5.9 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




Panel D:

**2018 Accreditation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | No Accreditation | 438 | 36.1 | 36.1 | 36.1 |
| | AACSB | 503 | 41.5 | 41.5 | 77.6 |
| | ACBSP | 197 | 16.2 | 16.2 | 93.8 |
| | IACBE | 75 | 6.2 | 6.2 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




Panel E:

**2019 Accreditation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | No Accreditation | 434 | 35.8 | 35.8 | 35.8 |
| | AACSB | 507 | 41.8 | 41.8 | 77.6 |
| | ACBSP | 197 | 16.2 | 16.2 | 93.8 |
| | IACBE | 75 | 6.2 | 6.2 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |

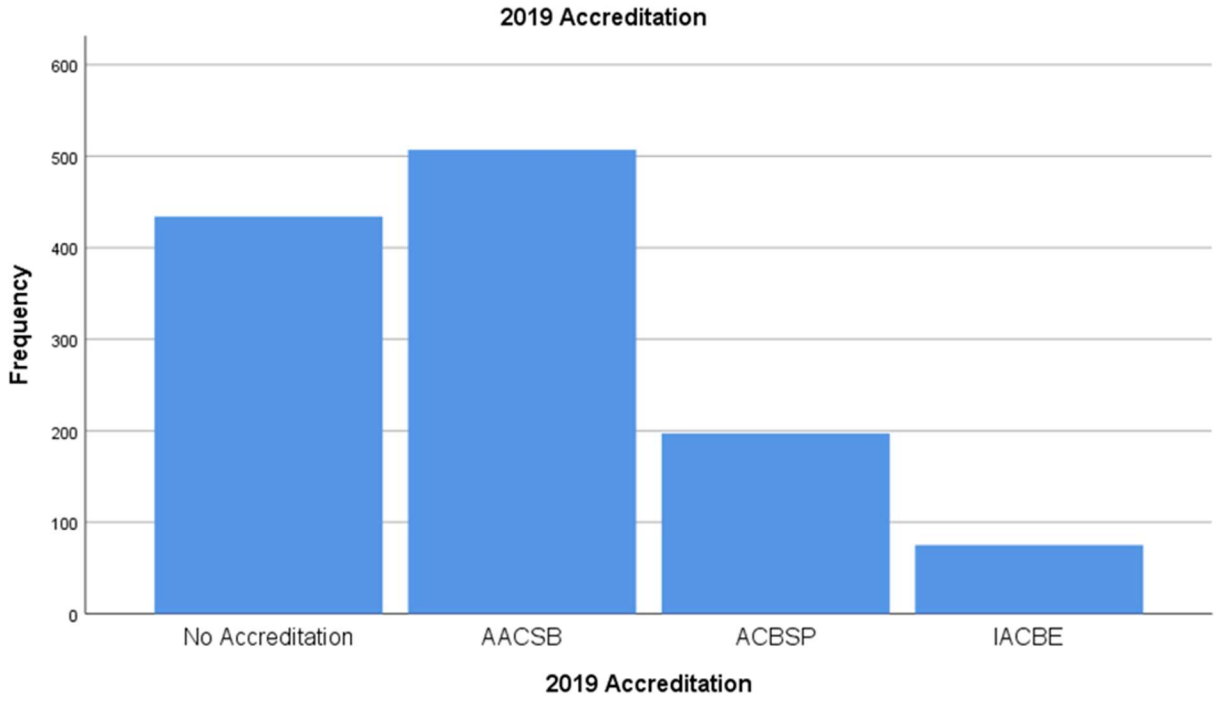
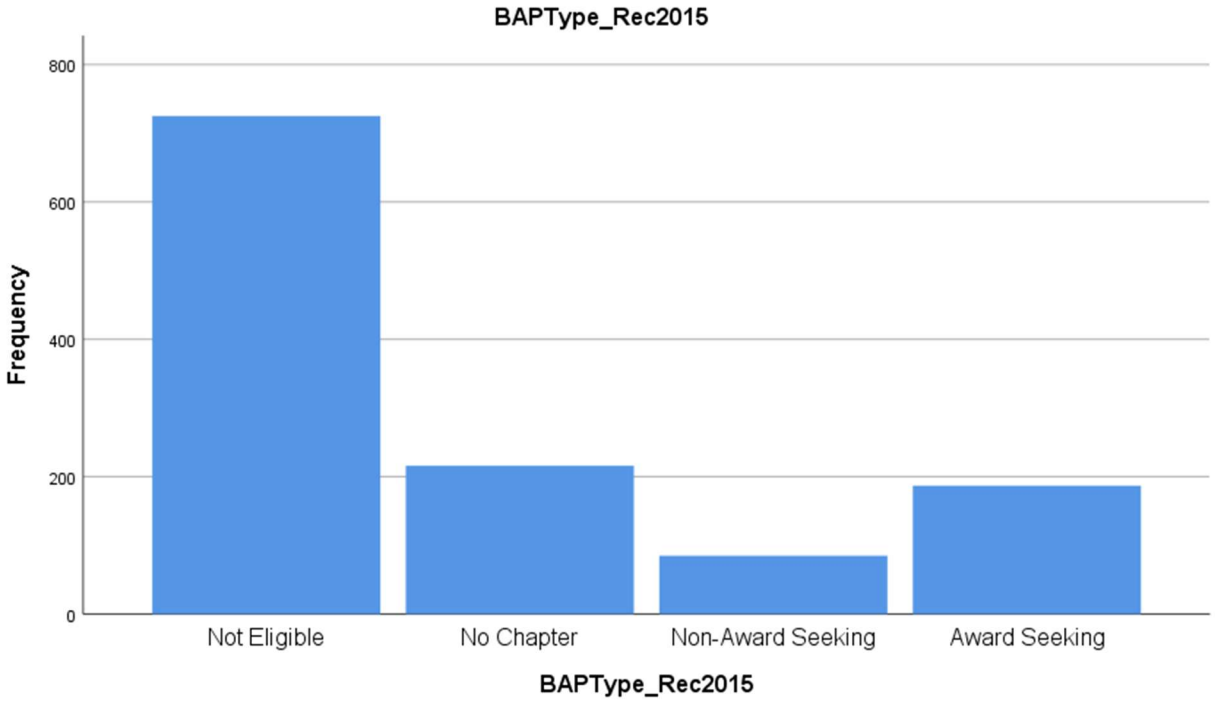



TABLE 3: Descriptive Statistics for Beta Alpha Psi Type

Panel A:

**BAPType_Rec2015**

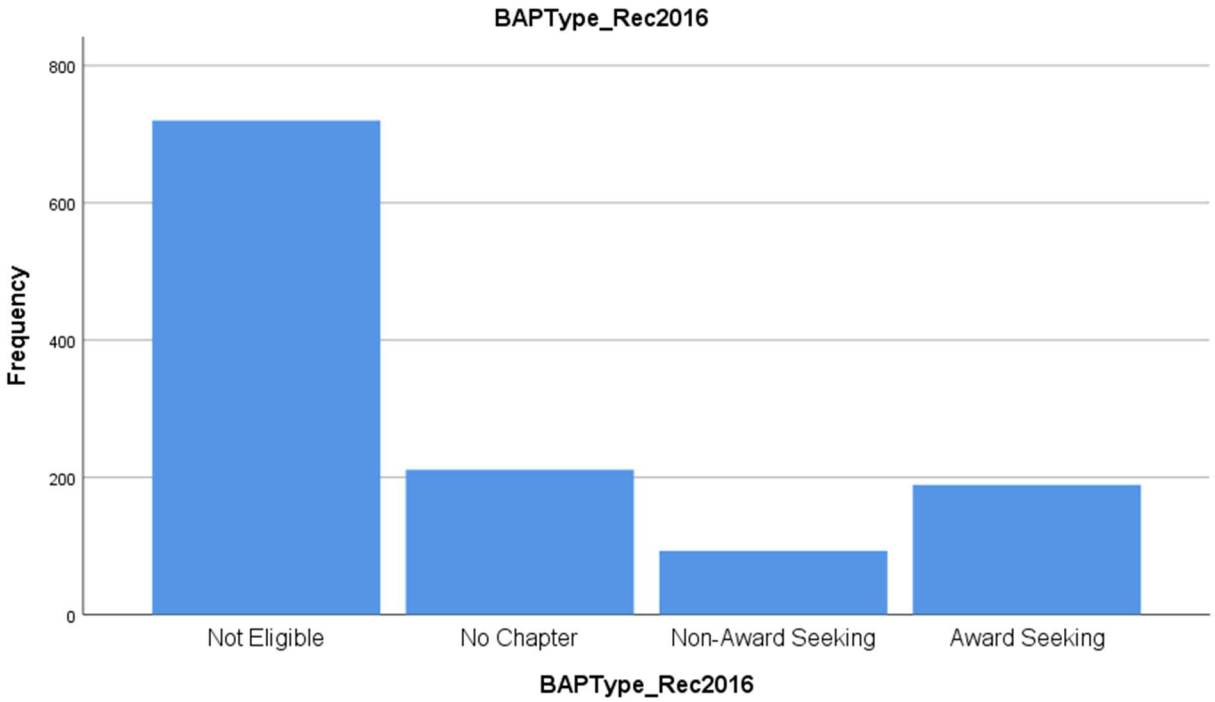
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Not Eligible | 725 | 59.8 | 59.8 | 59.8 |
| | No Chapter | 216 | 17.8 | 17.8 | 77.6 |
| | Non-Award Seeking | 85 | 7.0 | 7.0 | 84.6 |
| | Award Seeking | 187 | 15.4 | 15.4 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




Panel B:

**BAPType_Rec2016**

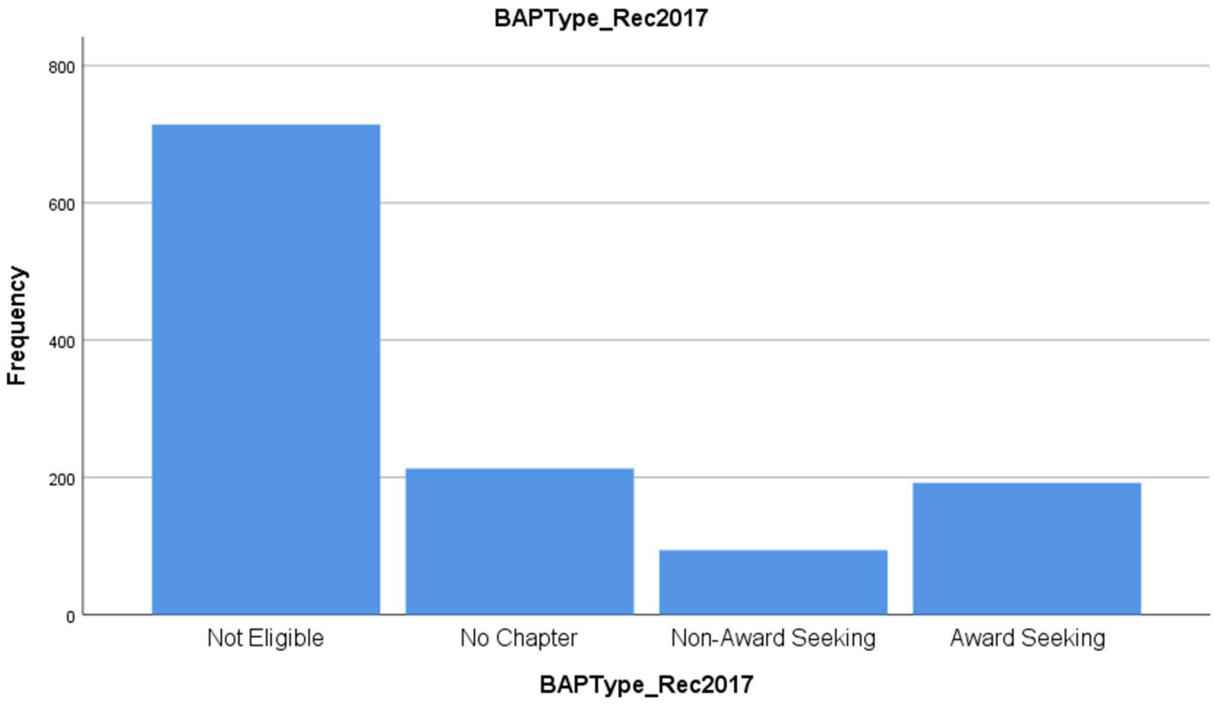
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Not Eligible | 720 | 59.4 | 59.4 | 59.4 |
| | No Chapter | 211 | 17.4 | 17.4 | 76.8 |
| | Non-Award Seeking | 93 | 7.7 | 7.7 | 84.4 |
| | Award Seeking | 189 | 15.6 | 15.6 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




Panel C:

**BAPType_Rec2017**

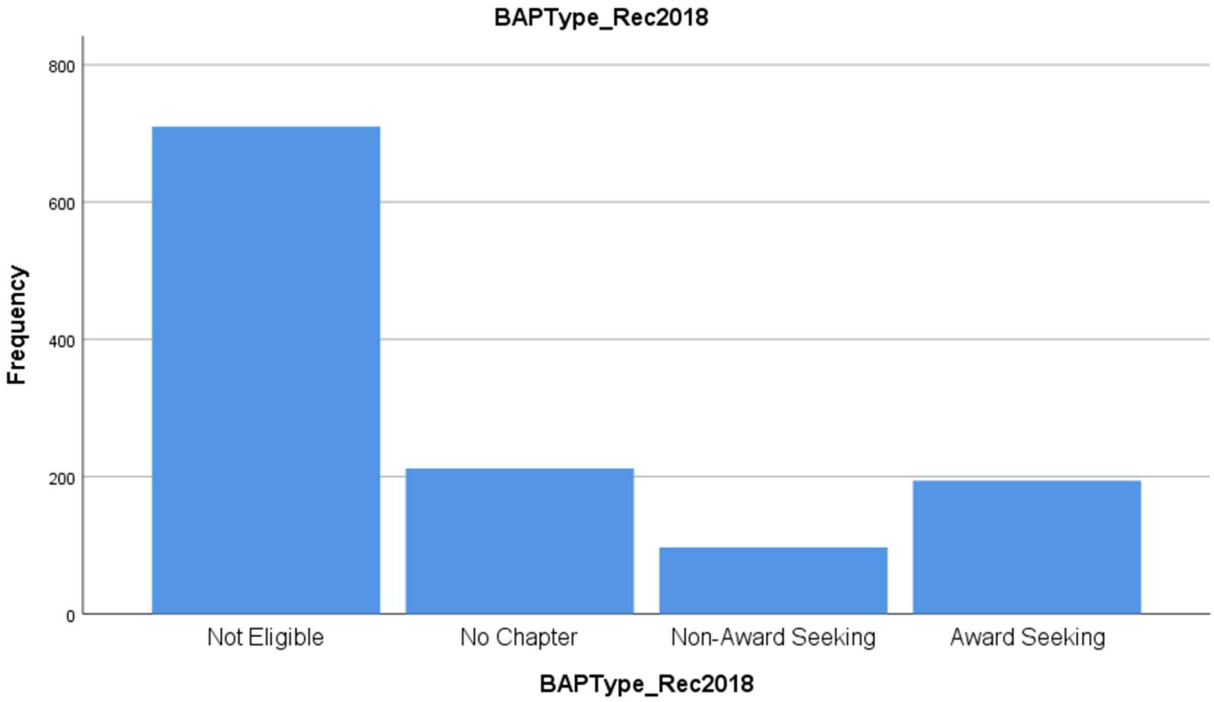
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Not Eligible | 714 | 58.9 | 58.9 | 58.9 |
| | No Chapter | 213 | 17.6 | 17.6 | 76.4 |
| | Non-Award Seeking | 94 | 7.7 | 7.7 | 84.2 |
| | Award Seeking | 192 | 15.8 | 15.8 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




Panel D:

**BAPType_Rec2018**

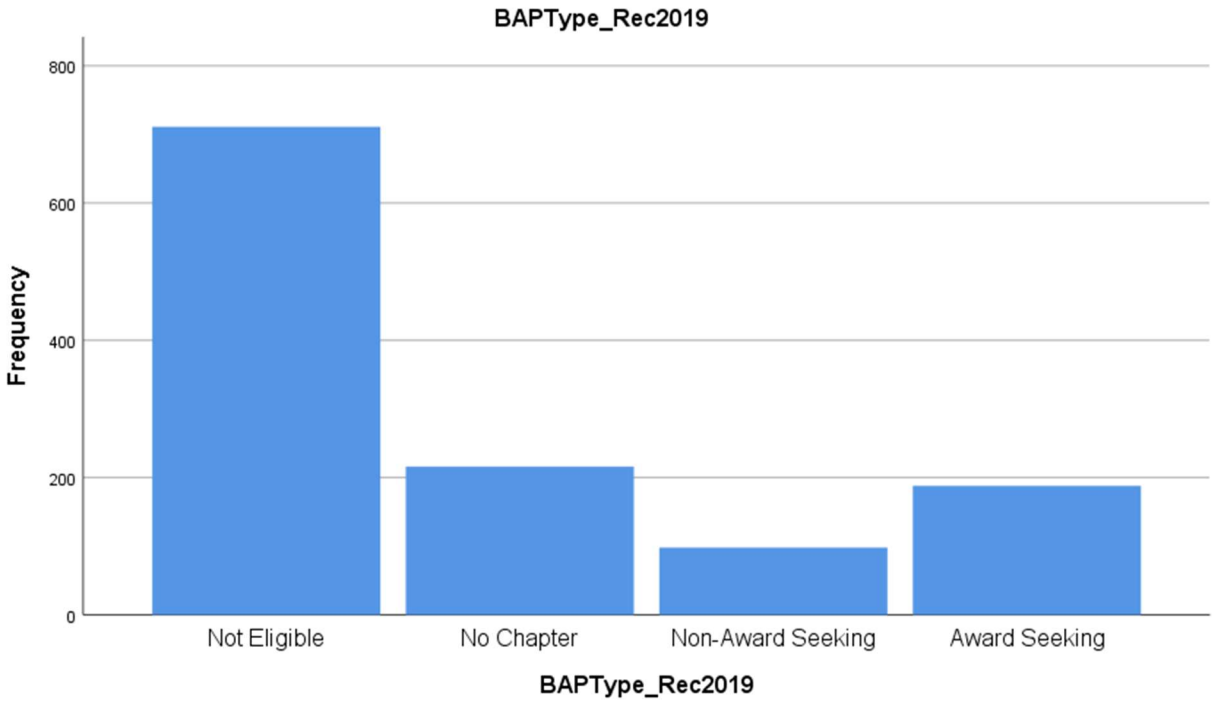
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Not Eligible | 710 | 58.5 | 58.5 | 58.5 |
| | No Chapter | 212 | 17.5 | 17.5 | 76.0 |
| | Non-Award Seeking | 97 | 8.0 | 8.0 | 84.0 |
| | Award Seeking | 194 | 16.0 | 16.0 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




Panel E:

**BAPType_Rec2019**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Not Eligible | 711 | 58.6 | 58.6 | 58.6 |
| | No Chapter | 216 | 17.8 | 17.8 | 76.4 |
| | Non-Award Seeking | 98 | 8.1 | 8.1 | 84.5 |
| | Award Seeking | 188 | 15.5 | 15.5 | 100.0 |
| | Total | 1213 | 100.0 | 100.0 | |




## 4) Results

Two ANOVA tests were performed for each of the five years: one for Accreditation type and another for Beta Alpha Psi type. In addition to the ANOVA tests, contrast tests were performed. For Accreditation type, the variables for the first contrast test were No Accreditation and Accreditation. The second contrast test looks for differences in scores between institutions that are AACSB accredited and institutions that have another accreditation (ACBSP or IACBE).

### *a) Accreditation Type*

For 2015, Accreditation Type significantly affected the 2015 FT average score $F(2, 1052) = 57.786$, $p = .000$). Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities without any accreditation as compared to those exam takers from universities with an accreditation,

t(1052) = 2.030, p = .043. Planned comparisons also demonstrate that there is a significant difference between the scores of exam takers from universities with AACSB accreditation as compared to those exam takers from universities with another accreditation, t(1052) = -9.657, p = .000. As Graph 1 shows, non-AACSB accredited institutions produce significantly inferior test scores.

**TABLE 4**

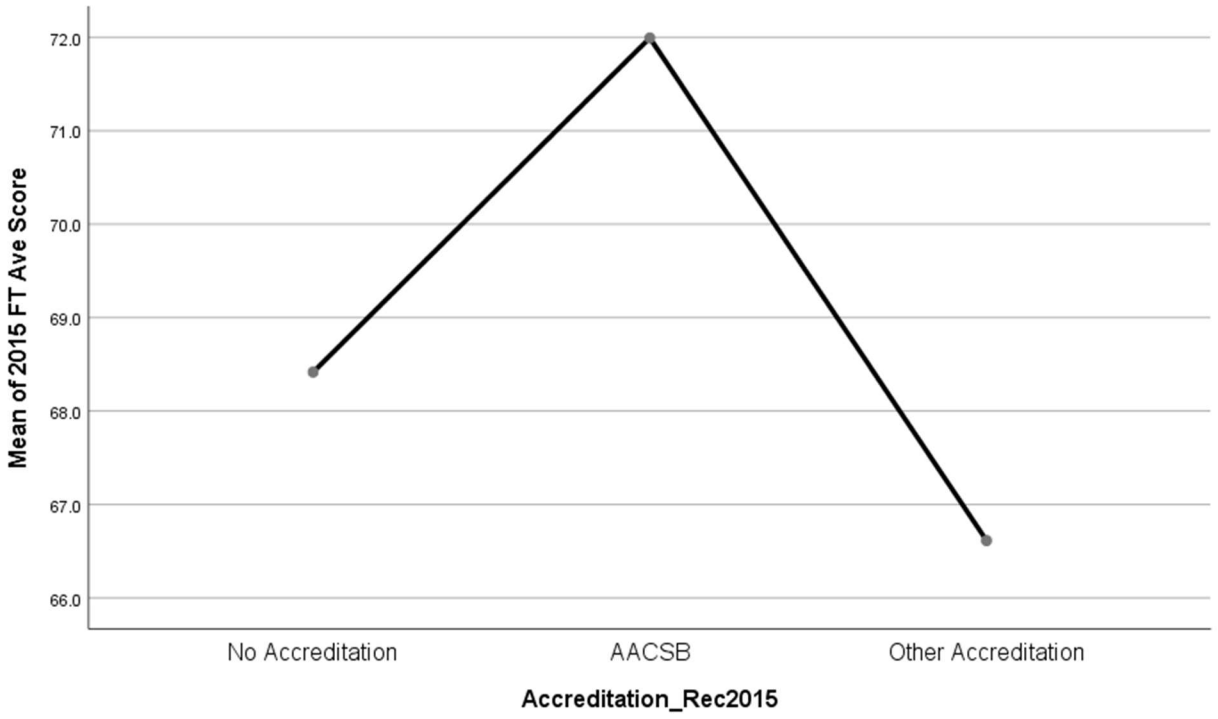
**Panel 2015: H1a & H1b (ANOVA)**

Dependent Variable: 2015 FT Average Score

| | MS | df | F | Sig. |
|---|---|---|---|---|
| *Between-Subjects* | | | | |
| Accreditation Type | 2505.540 | 2 | 57.786 | .000 |
| Error | 43.359 | 1052 | | |

| | value | df | t-val. | Sig. |
|---|---|---|---|---|
| *Main Effects Contrast Testing* | | | | |
| No Accreditation vs. Accreditation | 1.773 | 1052 | 2.030 | .043 |
| AACSB vs. Other Accreditation | -5.381 | 1052 | -9.657 | .000 |

Graph 1



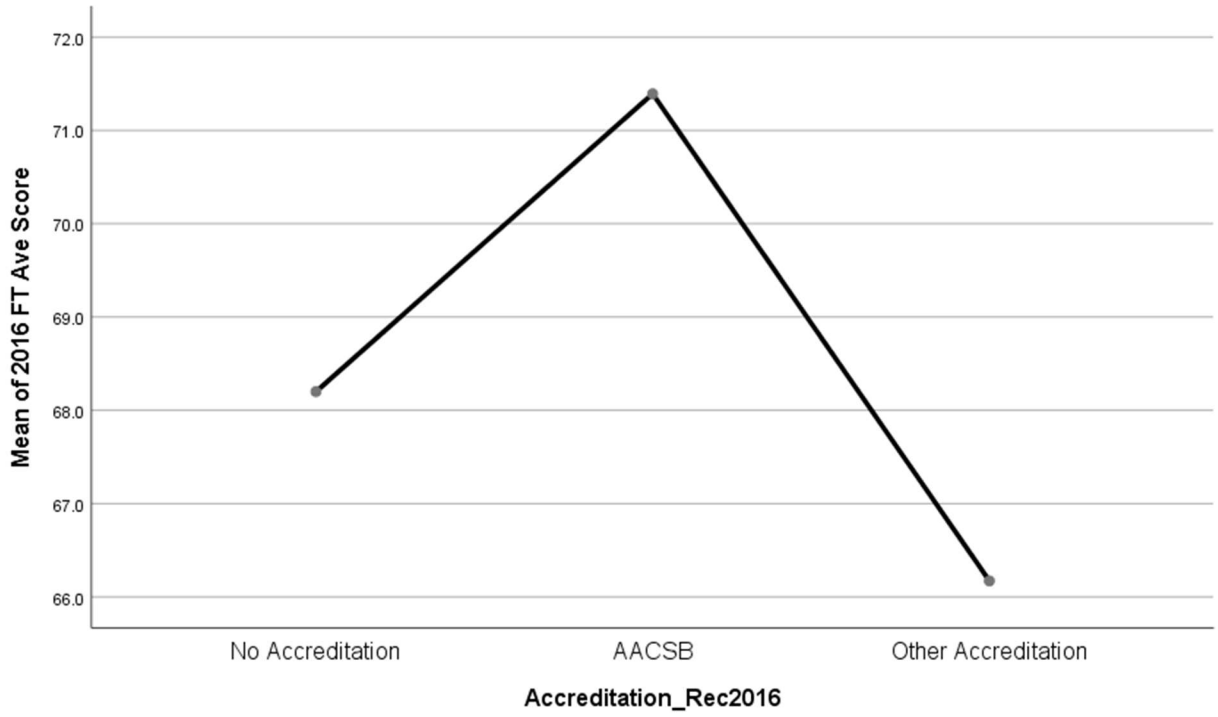
In 2016, Accreditation Type significantly affected the 2016 FT average score F(2, 1059) = 48.930, p = .000). However, no significant difference appears between the scores of exam takers from universities without any accreditation as compared to those exam takers from universities with an accreditation. Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities with AACSB accreditation as compared to those exam takers from universities with another accreditation, t(1059) = -9.361, p = .000. As Graph 2 shows, non-AACSB accredited institutions produce significantly inferior test scores.

**Panel 2016: H1a & H1b (ANOVA)**

Dependent Variable: 2016 FT Average Score

| | MS | df | F | Sig. |
|---|---|---|---|---|
| *Between-Subjects* | | | | |
| Accreditation Type | 2258.240 | 2 | 48.930 | .000 |
| Error | 46.152 | 1059 | | |
| | **value** | **df** | **t-val.** | **Sig.** |
| *Main Effects Contrast Testing* | | | | |
| No Accreditation vs. Accreditation | .790 | 1059 | .873 | .383 |
| AACSB vs. Other Accreditation | -5.221 | 1059 | -9.361 | .000 |

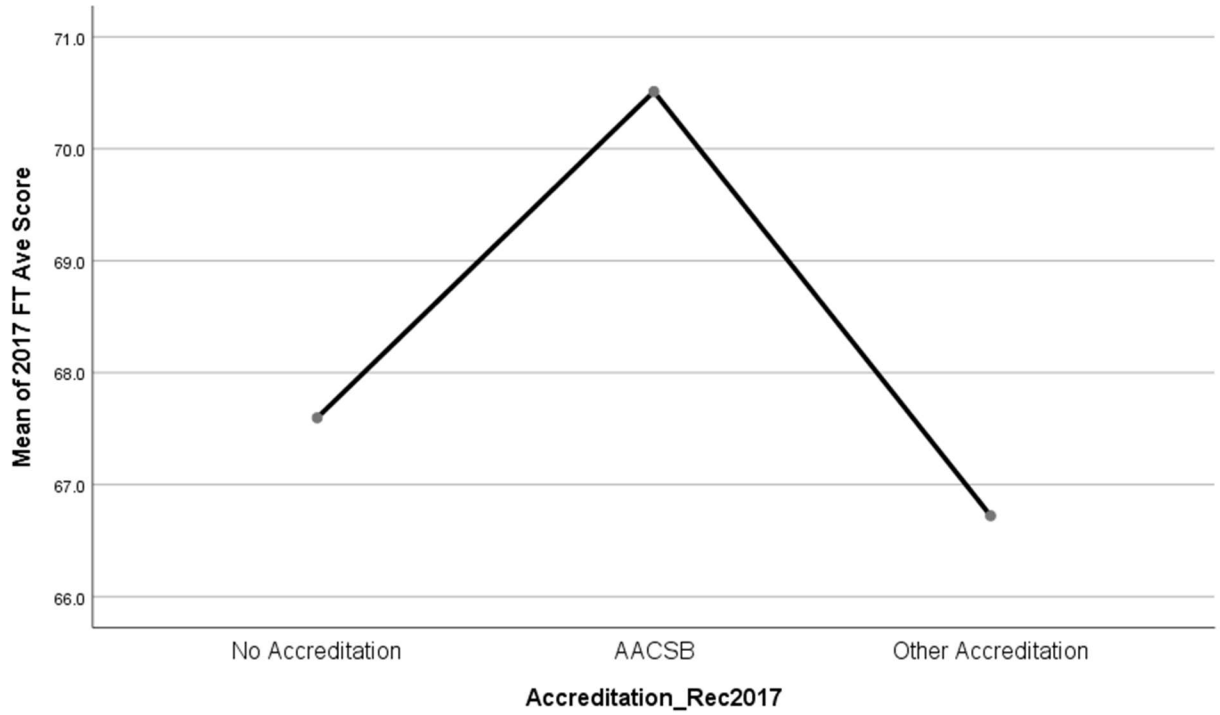
Graph 2




For 2017, Accreditation Type significantly affected the 2017 FT average score $F(2, 1022) = 30.303$, $p = .000$). Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities without any accreditation as compared to those exam takers from universities with an accreditation, $t(1022) = 2.174$, $p = .030$. Planned comparisons also demonstrate that there is a significant difference between the scores of exam takers from universities with AACSB accreditation as compared to those exam takers from universities with another accreditation, $t(1022) = -6.766$, $p = .000$. As Graph 3 shows, non-AACSB accredited institutions produce significantly inferior test scores.

| **Panel 2017: H1a & H1b (ANOVA)** | | | | |
|---|---|---|---|---|
| Dependent Variable: 2017 FT Average Score | | | | |
| | MS | df | F | Sig. |
| *Between-Subjects* | | | | |
| Accreditation Type | 1405.450 | 2 | 30.303 | .000 |
| Error | 46.380 | 1022 | | |
| | value | df | t-val. | Sig. |
| *Main Effects Contrast Testing* | | | | |
| No Accreditation vs. Accreditation | 2.038 | 1022 | 2.174 | .030 |
| AACSB vs. Other Accreditation | -3.789 | 1022 | -6.766 | .000 |

Graph 3




For 2018, Accreditation Type significantly affected the 2018 FT average score $F(2, 989) = 42.143$, $p = .000$). No significant difference appears between the scores of exam takers from universities without any accreditation as compared to those exam takers from universities with an accreditation. Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities with AACSB

accreditation as compared to those exam takers from universities with another accreditation, t(989) = -3.084, p = .002. As Graph 4 shows, non-AACSB accredited institutions produce significantly inferior test scores.

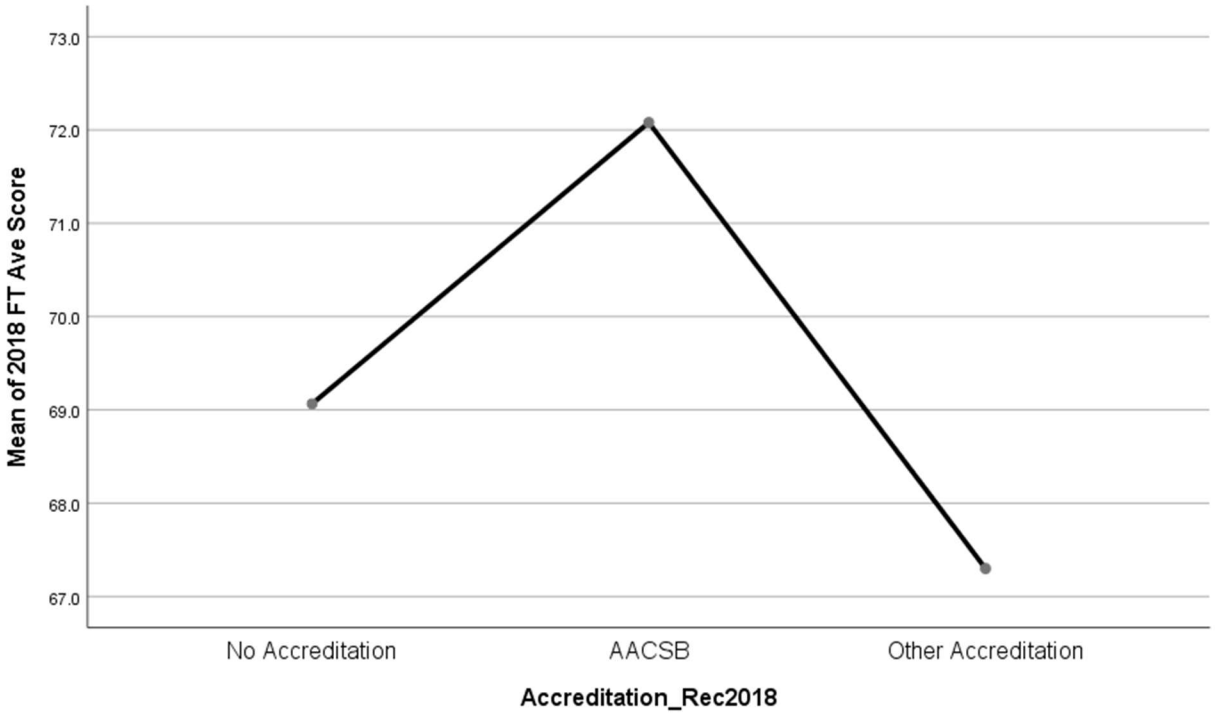
**Panel 2018: H1a & H1b (ANOVA)**

Dependent Variable: 2018 FT Average Score

| | MS | df | F | Sig. |
|---|---|---|---|---|
| *Between-Subjects* | | | | |
| Accreditation Type | 1948.437 | 2 | 42.143 | .000 |
| Error | 46.234 | 989 | | |

| | value | df | t-val. | Sig. |
|---|---|---|---|---|
| *Main Effects Contrast Testing* | | | | |
| No Accreditation vs. Accreditation | 1.249 | 989 | 1.289 | .198 |
| AACSB vs. Other Accreditation | -4.781 | 989 | -8.587 | .000 |

Graph 4



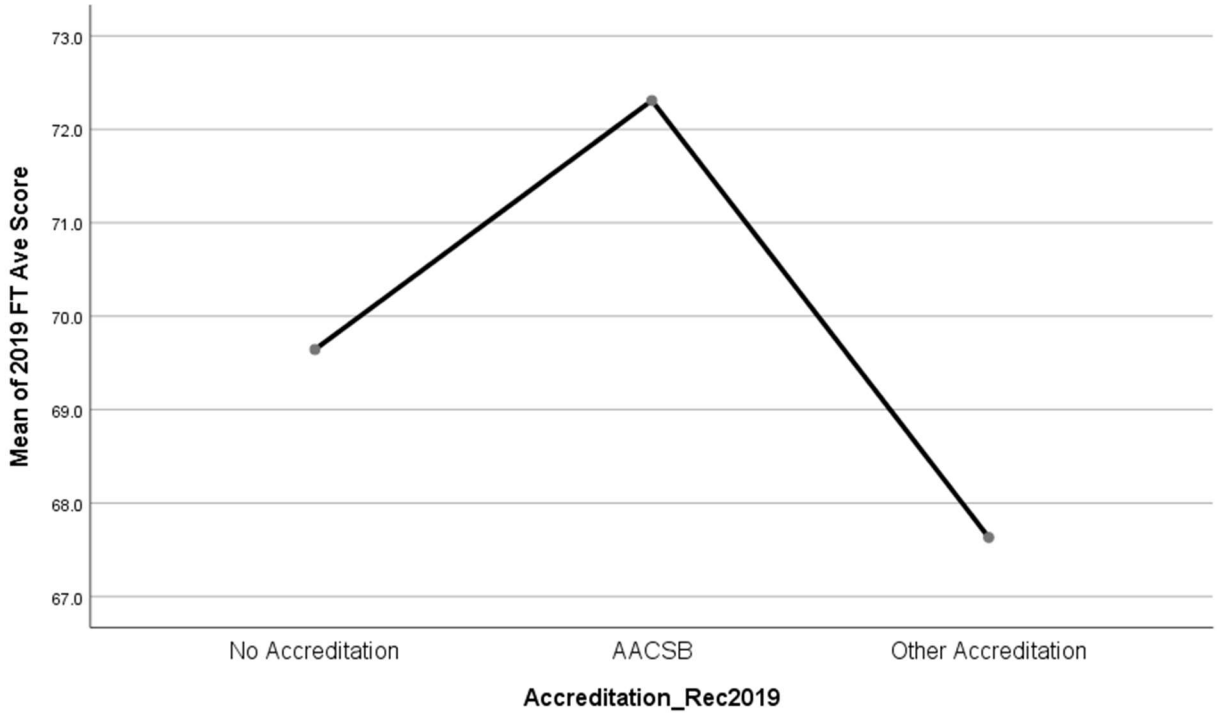
For 2019, Accreditation Type significantly affected the 2019 FT average score $F(2, 976) = 37.918$, $p = .000$). There is no significant difference that appears between the scores of exam takers from universities without any accreditation as compared to those exam takers from universities with an accreditation. However, planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities with AACSB accreditation as compared to those exam takers from universities with another accreditation, $t(976) = -8.313$, $p = .000$. As Graph 5 shows, non-AACSB accredited institutions produce significantly inferior test scores.

**Panel 2019: H1a & H1b (ANOVA)**

Dependent Variable: 2019 FT Average Score

| | MS | df | F | Sig. |
|---|---|---|---|---|
| *Between-Subjects* | | | | |
| Accreditation Type | 1769.346 | 2 | 37.918 | .000 |
| Error | 46.663 | 976 | | |
| | **value** | **df** | **t-val.** | **Sig.** |
| *Main Effects Contrast Testing* | | | | |
| No Accreditation vs. Accreditation | .653 | 976 | .658 | .511 |
| AACSB vs. Other Accreditation | -4.677 | 976 | -8.313 | .000 |

Graph 5




*b) Beta Alpha Psi Type*

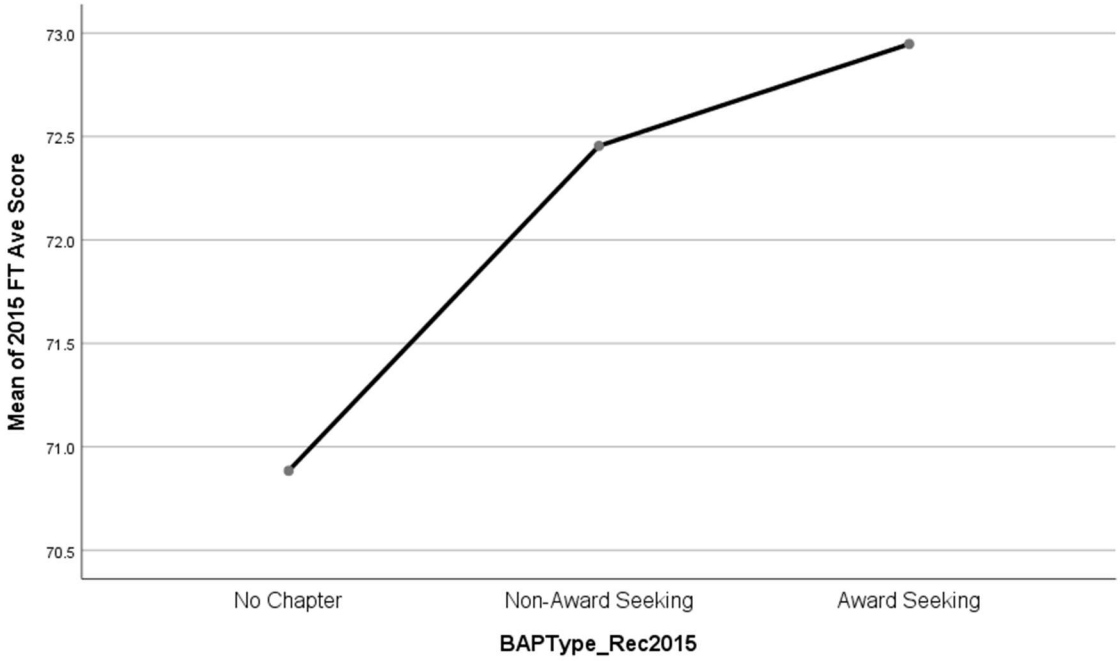
Contrast tests were run for Beta Alpha Psi type as well. For Beta Alpha Psi type, the levels for the first contrast test were No Chapter and Has a Chapter. The second contrast test looks for differences in scores between schools that are non-award seeking and schools that are award seeking (Distinguished, Superior, or Gold status).

For 2015, Beta Alpha Psi Type significantly affected the 2015 FT average score $F(2, 472) = 6.949$, $p = .001$). Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities without a BAP chapter as compared to those exam takers from universities with a BAP chapter, $t(472) = 3.368$, $p = .001$. No significant difference appears between universities with BAP chapters seeking awards and those that do not seek awards $t(472) = .667$, $p = .505$).

**TABLE 5**

| **Panel 2015: H2a & H2b (ANOVA)** | | | | |
|---|---|---|---|---|
| Dependent Variable: 2015 FT Average Score | | | | |
| | MS | df | F | Sig. |
| *Between-Subjects* | | | | |
| Beta Alpha Psi Type | 219.354 | 2 | 6.949 | .001 |
| Error | 31.564 | 472 | | |
| | value | df | t-val. | Sig. |
| *Main Effects Contrast Testing* | | | | |
| No Chapter vs. Has Chapter | 3.633 | 472 | 3.368 | .001 |
| Not award-seeking vs. Award-Seeking | .492 | 472 | .667 | .505 |

Graph 6




For 2016, Beta Alpha Psi Type significantly affected the 2016 FT average score $F(2, 481) = 10.519$, $p = .000$). Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities without a BAP chapter as compared to those exam takers from universities with a BAP chapter, $t(481) =$

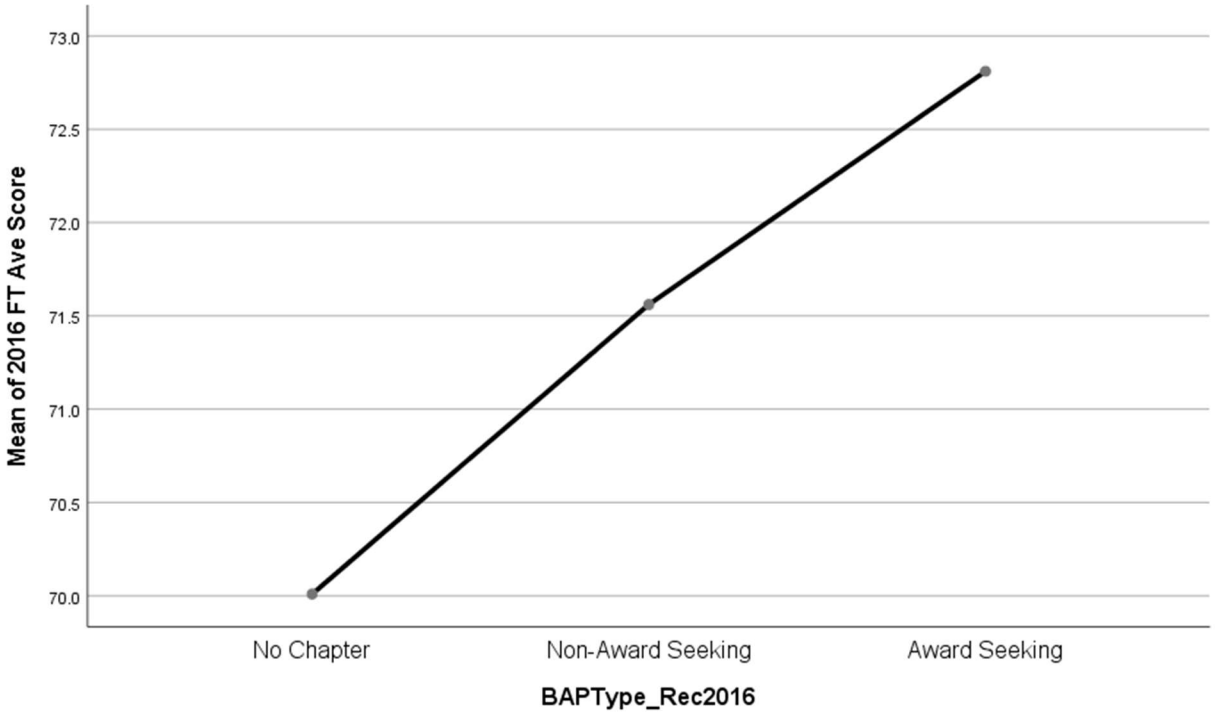
3.801, p = .000. No significant difference appears between universities with BAP chapters seeking awards and those that do not seek awards t(481) = 1.622, p = .105).

**Panel 2016: H2a & H2b (ANOVA)**

Dependent Variable: 2016 FT Average Score

| | MS | df | F | Sig. |
|---|---|---|---|---|
| *Between-Subjects* | | | | |
| Beta Alpha Psi Type | 385.634 | 2 | 10.519 | .000 |
| Error | 36.661 | 481 | | |
| | **value** | **df** | **t-val.** | **Sig.** |
| *Main Effects Contrast Testing* | | | | |
| No Chapter vs. Has Chapter | 4.354 | 481 | 3.801 | .000 |
| Not award-seeking vs. Award-Seeking | 1.250 | 481 | 1.622 | .105 |

Graph 7

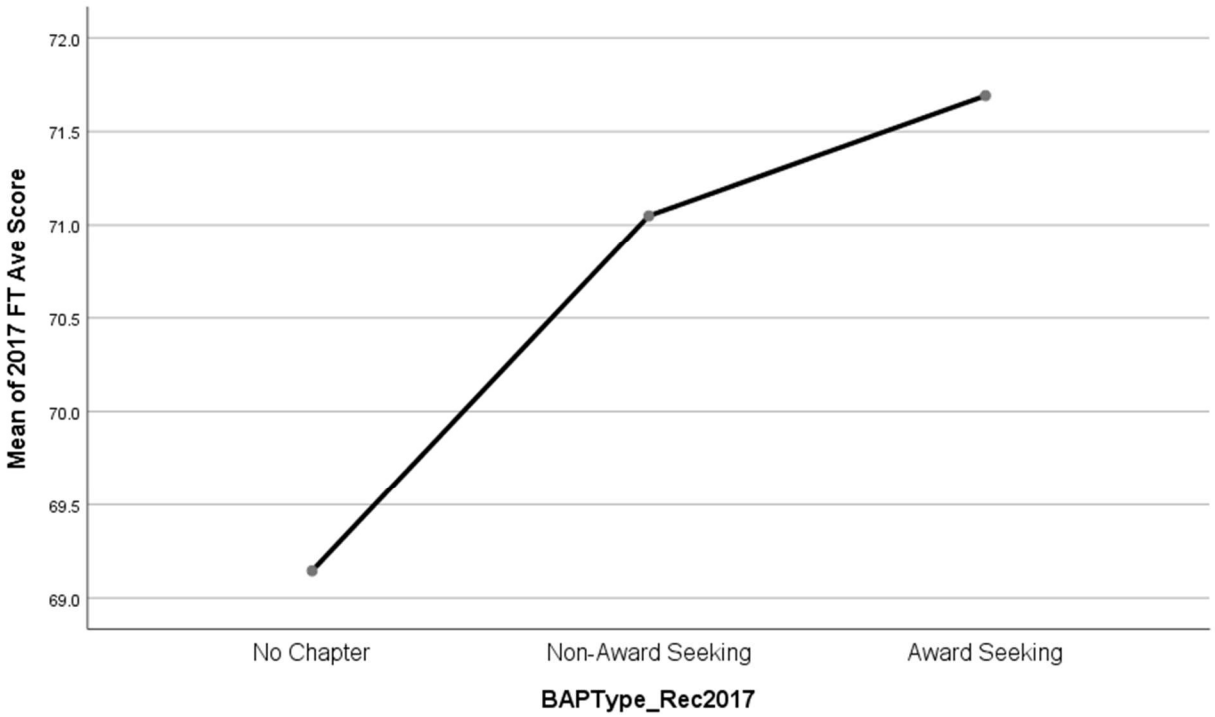



For 2017, Beta Alpha Psi Type significantly affected the 2017 FT average score F(2, 481) = 8.842, p = .000). Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities without a BAP chapter as

compared to those exam takers from universities with a BAP chapter, t(481) = 3.825, p = .000. No significant difference appears between universities with BAP chapters seeking awards and those that do not seek awards t(481) = .826, p = .409).

| **Panel 2017: H2a & H2b (ANOVA)** | | | | |
|---|---|---|---|---|
| Dependent Variable: 2017 FT Average Score | | | | |
| | MS | df | F | Sig. |
| *Between-Subjects* | | | | |
| Beta Alpha Psi Type | 333.480 | 2 | 8.842 | .000 |
| Error | 37.716 | 481 | | |
| | value | df | t-val. | Sig. |
| *Main Effects Contrast Testing* | | | | |
| No Chapter vs. Has Chapter | 4.451 | 481 | 3.825 | .000 |
| Not award-seeking vs. Award-Seeking | .642 | 481 | .826 | .409 |

Graph 8



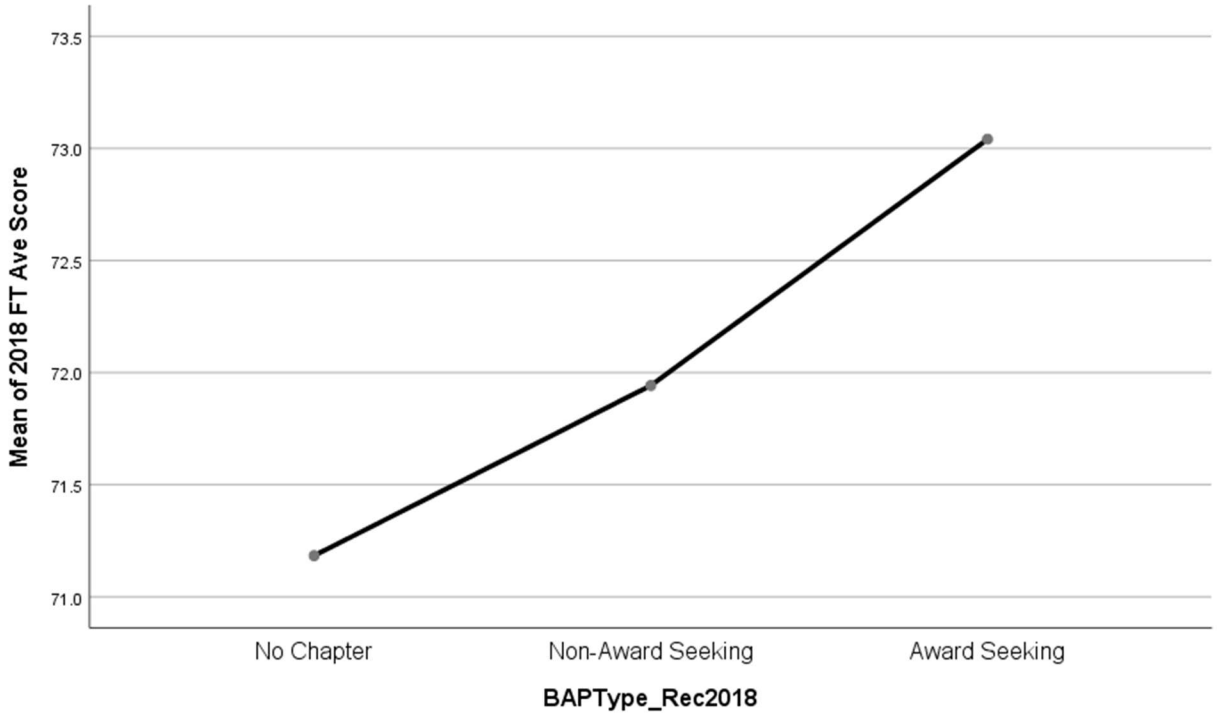
For 2018, Beta Alpha Psi Type significantly affected the 2018 FT average score F(2, 479) = 4.462, p = .012). Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities without a BAP chapter as compared to those exam takers from universities with a BAP chapter, t(479) = 2.243, p = .025. No significant difference appears between universities with BAP chapters seeking awards and those that do not seek awards t(479) = 1.442, p = .150).

**Panel 2018: H2a & H2b (ANOVA)**

Dependent Variable: 2018 FT Average Score

| | MS | df | F | Sig. |
|---|---|---|---|---|
| *Between-Subjects* | | | | |
| Beta Alpha Psi Type | 167.212 | 2 | 4.462 | .012 |
| Error | 37.476 | 479 | | |
| | **value** | **df** | **t-val.** | **Sig.** |
| *Main Effects Contrast Testing* | | | | |
| No Chapter vs. Has Chapter | 2.617 | 479 | 2.243 | .025 |
| Not award-seeking vs. Award-Seeking | 1.099 | 479 | 1.442 | .150 |

Graph 9



For 2019, Beta Alpha Psi Type significantly affected the 2019 FT average score F(2, 483) = 4.610, p = .010). Planned comparisons demonstrate that there is a significant difference between the scores of exam takers from universities without a BAP chapter as compared to those exam takers from universities with a BAP chapter, t(483) = 2.619, p = .005. No significant difference appears between universities with BAP chapters seeking awards and those that do not seek awards t(483) = .936, p = .350).

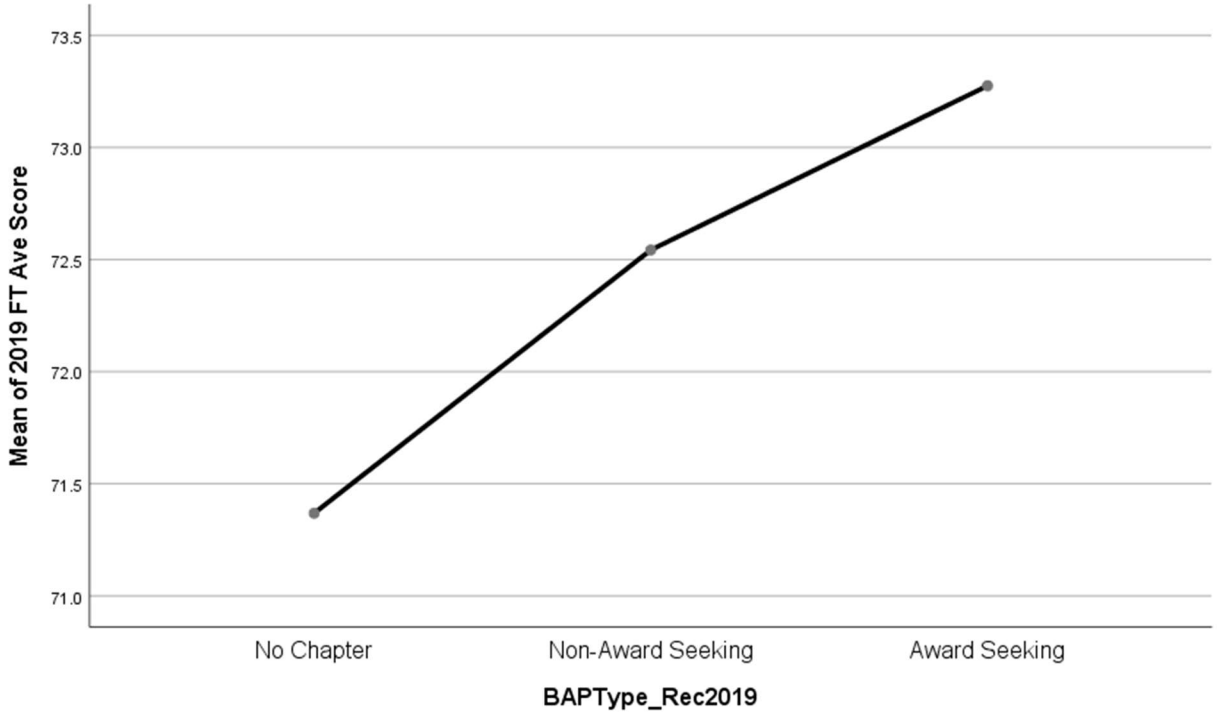
**Panel 2019: H2a & H2b (ANOVA)**

Dependent Variable: 2019 FT Average Score

| | MS | df | F | Sig. |
|---|---|---|---|---|
| *Between-Subjects* | | | | |
| Beta Alpha Psi Type | 179.509 | 2 | 4.610 | .010 |
| Error | 38.937 | 483 | | |

| | value | df | t-val. | Sig. |
|---|---|---|---|---|
| *Main Effects Contrast Testing* | | | | |
| No Chapter vs. Has Chapter | 3.081 | 483 | 2.619 | .009 |
| Not award-seeking vs. Award-Seeking | .732 | 483 | .936 | .350 |

Graph 10



## 5) Conclusion

There is a constant significant difference between academic institutions that were AACSB accredited and institutions that were accredited by other bodies (ACBSP or IACBE) that showed AACSB accredited institutions performed much better. There was a significant difference in the years 2015 and 2017, in both years academic institutions that had some sort of accreditation performed better on average than institutions with no accreditation. However, for the years 2016, 2018, and 2019 there is no significant difference in first-time scores on the CPA exam between academic institutions that had no accreditation and institutions that did have an accreditation. A potential reason for having no significant results could be that academic institutions with an "Other" accreditation (IACBE or ACBSP) often performed more poorly than institutions with no accreditation at all.

Gaining any type of accreditation means going through a somewhat rigorous process to assure that the academic institution meets the standards of the accrediting body. That being said, these results are interesting because three out of the five years show that academic institutions with no accreditation at all performed better than institutions who did go through an accreditation process. Without any research, one would reasonably assume that accredited institutions would consistently perform better on the CPA exam than institutions with no accreditation, yet these results show that is not the case. Additional research could take out the AACSB accreditation aspect altogether and focus solely on ACBSP vs. IACBE vs. No accreditation. By combining both ACBSP and IACBE, it is difficult to determine which of these contributes more to the higher scores, but separating them could yield some interesting results such as which one performs better on the CPA exam.

There is a significant difference between schools that do have a Beta Alpha Psi chapter and schools that do not have a chapter. There is no significant difference between award seeking chapters and non-award seeking chapters. Across the five years, the trend indicates that as the level of Beta Alpha Psi status increases from distinguished to superior and gold, so do the average CPA exam scores, but not with any significance.

While these results may not be very surprising, they are interesting. Beta Alpha Psi is not meant to prepare students for the CPA exam in any way, but as previously mentioned, a higher caliber of student tends to be a member of Beta Alpha Psi, making their success on the CPA exam not surprising. It is to be expected that institutions with Beta Alpha Psi chapters will perform better than institutions without. One aspect of these results that was not as expected was the fact that there was no significant difference between award seeking chapters and non-award seeking chapters. Additional research could delve into the differences between different award statuses in Beta Alpha Psi and what it takes to obtain each status. Then, instead of grouping them into award and non-award, break them down by status to see the trends across the years.

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